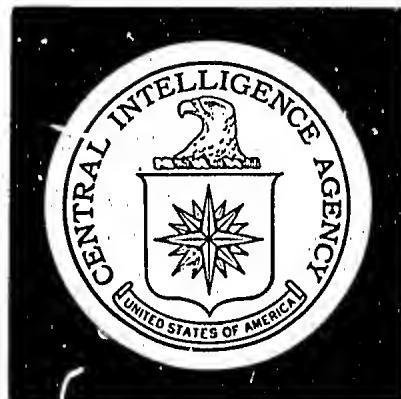


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DIRECTORATE OF  
INTELLIGENCE

# Intelligence Memorandum

*India: Prospects For Private Foreign Investment*

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October 1971

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CENTRAL INTELLIGENCE AGENCY  
Directorate of Intelligence  
October 1971

INTELLIGENCE MEMORANDUM

INDIA: PROSPECTS FOR PRIVATE FOREIGN INVESTMENT

Introduction

1. Since Independence in 1947, India's government policy has hampered the inflow of private foreign investment. More recently, private foreign investors have been faced with increased restrictions. Many foreign firms in existence at Independence have not expanded but have repatriated capital in reaction to New Delhi's demands for Indianization, unfavorable wage and price policies, and uncertainties about future policies of a government ostensibly committed to socialism and an expanded public sector. Moreover, bureaucratic delays and mounds of red tape have frustrated many potential foreign investors, sharply restricting the flow of private capital into new ventures. This memorandum evaluates the prospects for private foreign investment in India in the light of past performance, government policies, and investment opportunities.

*Note: This memorandum was prepared by the Office of Economic Research and coordinated within the Directorate of Intelligence.*

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**CONFIDENTIAL**DiscussionPrivate Foreign Investment Since Independence

2. In 1948 the book value of direct private foreign investment<sup>(1)</sup> in India was about \$450 million,<sup>(2)</sup> or about one-third of the economy's industrial capital assets. Foreign capital was concentrated in export-oriented industries and related services, especially exports destined for the investor's home market. One-fifth of foreign investment was in tea plantations, over two-fifths in service activities - principally foreign trade - and over one-fourth in manufacturing, mainly jute. Less than one-tenth was in the petroleum industry, which serviced predominantly the domestic market. Moreover, foreign companies dominated those industries in which they invested. About 40% of all foreign trade was handled by foreign firms and two-thirds of this trade was financed by foreign banks. More than four-fifths of the area planted to tea and two-thirds of tea exports, over three-fourths of the jute industry, and one-half of the coal industry were under foreign control.

3. Branch offices were the predominant form of foreign investment at that time (see Table 1), and foreign control rested not only on ownership but also on a unique system of business organization - the managing agency. Such agencies administered British investment, which included about

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*1. Direct investment includes the net assets in India of foreign-owned branches (representing the net claims on them by non-residents) and equity holdings of investors in the country of control and their proportionate share in the free reserves of the assets of the foreign-controlled rupee companies. Foreign investment in construction, insurance, and banking industries in India are, unless otherwise noted, excluded from the data presented in this memorandum. Book value includes net inflow after allowing for repatriation, and accounting and valuation changes.*

*2. Portfolio investment has been excluded from this memorandum. Portfolio investment in Indian statistics includes the ordinary shares of companies to the extent that these are held by investors in countries other than the country of control, non-resident holdings of preference shares and debentures of rupee companies, and outstanding private loans including suppliers credits. Equity investment, which makes up about 10% of so-called portfolio investment, has increased about 15% since 1948 to \$133 million in 1970, with roughly two-thirds of the gain occurring after 1965. Suppliers' credits and other loans currently represent about 90% of foreign portfolio investment in India.*

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Table 1

**India:**  
**Direct Private Foreign Investment a/**

|                    | Million US \$  |                |                |                |
|--------------------|----------------|----------------|----------------|----------------|
|                    | 31 Jul<br>1948 | 31 Dec<br>1955 | 31 Dec<br>1960 | 31 Mar<br>1970 |
| <b>Total</b>       | 443.2          | 813.1          | 1,053.8        | 926.9          |
| Rupee companies b/ | 157.9          | 279.0          | 474.6          | 588.0          |
| Foreign branches   | 285.3          | 534.1          | 579.2          | 338.9          |

a. Book value includes net inflow after allowing for repatriation and for accounting and valuation changes (including changes because of the devaluation of the pound sterling in November 1967 and the rupee devaluation in June 1966). This table excludes foreign investment in insurance and banking.

b. Joint ventures with Indian nationals.

four-fifths of total foreign investment. Managing agencies date from the early 1800s when lenders in London insisted that the firms receiving loans be reliably managed. So great were the managing agencies' powers that companies so managed were officially considered to be foreign controlled, whatever the share of local ownership. In the aftermath of the anti-British campaign following Independence, however, the managing agencies' dependence on government favor made them vulnerable to official discrimination. Moreover, the cooperation of Indian shareholders, on which UK managing houses had built their system of control, began breaking down. As few restrictions were imposed on capital repatriations, foreign investors in plantations and export-oriented industries gradually repatriated much of their capital.

4. By 1970 the structure of foreign investment had been dramatically altered. The principal form of direct investment had become the "rupee company," or jointly owned Indian enterprise (see Table 1). Private foreign investment shifted from export-oriented industries to petroleum and manufacturing, which accounted for more than two-thirds of direct private foreign investment (see Table 2). Services' share had declined since

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Table 2

**India:**  
**Direct Private Foreign Investment, by Industry a/**

|               | <u>31 Jul<br/>1948</u> | <u>31 Mar<br/>1970</u> |
|---------------|------------------------|------------------------|
|               | <u>Percent</u>         |                        |
| Petroleum     | 8.4                    | 18.7                   |
| Plantations   | 19.7                   | 16.7                   |
| Mining        | 4.3                    | 0.6                    |
| Manufacturing | 26.8                   | 50.8                   |
| Services      | 40.8                   | 13.2                   |
| <i>Total</i>  | <i>100.0</i>           | <i>100.0</i>           |
|               | <u>Million US \$</u>   |                        |
| <i>Total</i>  | <i>443.2</i>           | <i>926.9</i>           |

a. Book value includes net inflow after allowing for repatriation and for accounting and valuation changes (including changes because of the devaluation of the pound sterling in November 1967 and the rupee devaluation in June 1966). This table excludes foreign investment in insurance and banking.

Independence, principally because of the demise of foreign-owned export houses. New investments in domestic trade, however, had increased sharply.

5. Net direct investment inflows have declined almost steadily since 1965 (see Table 3), principally because of accelerated capital repatriation by the foreign petroleum, plantation, and mining companies, which have been generally prohibited from expanding. During 1965-68, the net direct investment outflow from these industries totaled almost \$50 million, and this outflow probably continued through 1970. New foreign investment has been slow since 1965, in part because of the sluggish performance of India's industrial sector.

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Table 3

India:

## Net Direct Private Foreign Investment Flows

| <u>Year a/</u>         | Total | Reinvested Earnings | Other | Million US \$ |
|------------------------|-------|---------------------|-------|---------------|
| 1948-53 annual average | 52.7  | 26.7                | 26.0  |               |
| 1954-55 annual average | 31.3  | 48.3                | -17.0 |               |
| 1956                   | 52.3  | 41.0                | 11.3  |               |
| 1957                   | 37.6  | 20.0                | 17.6  |               |
| 1958                   | 5.0   | 20.6                | -15.6 |               |
| 1959                   | 23.1  | 31.7                | - 8.6 |               |
| 1960                   | 111.9 | 30.4                | 81.5  |               |
| 1961                   | 52.7  | 33.2                | 19.5  |               |
| 1963                   | 47.9  | 16.4                | 31.5  |               |
| 1964                   | 47.0  | 20.6                | 26.4  |               |
| 1965                   | 92.6  | 42.8                | 49.8  |               |
| 1966                   | 31.9  | 39.5                | - 7.6 |               |
| 1967                   | 44.9  | 31.3                | 13.6  |               |
| 1968                   | 31.0  | 24.2                | 6.8   |               |
| 1969                   | 11.2  | N.A.                | N.A.  |               |
| 1970                   | -16.9 | N.A.                | N.A.  |               |

a. Calendar year through 1961, fiscal year ending 31 March of the stated year thereafter.

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6. In 1970, private foreign investors held about one-fifth of India's industrial capital assets compared with over one-third at Independence. Foreign-controlled industries include the following:

| <u>Industry</u>      | <u>Estimated Percentage of Foreign Control</u> |
|----------------------|--|
| Cigarettes           | 70+  |
| Pharmaceuticals      | 80+  |
| Rubber tires         | 75+  |
| Petroleum refineries | 45   |

Moreover, within manufacturing, private foreign investors probably control a substantial share of the assets of the aluminum, jute, tractor, petrochemical, specialized machine tools, and electrical goods industries.

#### Forms and Sources of Private Foreign Investment

7. Foreign firms are attracted to investing in India because it provides an easy way to sidestep import controls. The number of joint Indo-private foreign ventures, which provide a sales outlet for the foreign partner as an alternative to the virtually prohibited foreign branches, has increased sharply. Some of these ventures represent loans rather than direct investment and are little more than vehicles to sell technology, machinery, and equipment on deferred payment terms.<sup>(3)</sup> Joint ventures are concentrated in India's relatively small corporate sector but have been especially important in the newer, technologically complex, and patent-protected industries. Indo-foreign collaboration agreements are the predominant form of business organization in the manufacturing and service sectors.

8. Private foreign investment in India continues to be largely British, but the UK share has declined. US private investment in India has increased faster than that of any other country and now makes up over 15% of the total (see Table 4). According to Indian statistics, the book value of

*3. The recent trend toward taking some equity participation in lieu of royalties and fees for know-how and technical assistance accounts for the increase in equity portfolio investment since 1965.*

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Table 4

**India:**  
Direct Private Foreign Investment, by Country a/

|                | <u>31 Jul<br/>1948</u> | <u>31 Dec<br/>1960</u> | <u>31 Mar<br/>1970</u> |
|----------------|------------------------|------------------------|------------------------|
|                | <u>Percent</u>         |                        |                        |
| United States  | 4.4                    | 12.8                   | 15.6                   |
| United Kingdom | 80.5                   | 78.0                   | 72.0                   |
| Other          | 15.1                   | 9.2                    | 12.4                   |
| Total          | 100.0                  | 100.0                  | 100.0                  |
|                | <u>Million US \$</u>   |                        |                        |
| Total          | 443.2                  | 1,053.8                | 926.9                  |

*a. Book value includes net inflow after allowing for repatriation and for accounting and valuation changes (including changes because of the devaluation of the pound sterling in November 1967 and the rupee devaluation in June 1966). This table excludes foreign investment in insurance and banking.*

US direct private foreign investment is about \$150 million,<sup>(4)</sup> of which about 40% is in the petroleum industry. India has received less than 2% of US private foreign investment in all less developed countries. Joint

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4. According to the US Department of Commerce, which uses a different method of valuation and classification, US direct private foreign investment in India is about \$300 million. The United States, for example, counts private equity investments equivalent to 10% or more of the value of a foreign firm's ordinary shares as direct foreign investment. India, on the other hand, counts private foreign equity holdings as direct investment only if the foreign investor controls the Indian company.

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ventures are the principal form of US investment, and US firms account for nearly a quarter of India's private foreign collaboration agreements. About 400 US firms are involved, about 25% of which are operating under US licensing or technical assistance agreements only.<sup>(5)</sup>

**Investment Opportunities and Government Policies**

9. Foreign investors can participate in certain heavy industries, designated by New Delhi as "core" or critical, and in certain medium-sized industries, provided these are located in backward areas. In addition, New Delhi, concerned about the lag in exports of new manufactures on which most of its planned gain in exports depends,<sup>(6)</sup> has welcomed foreign private investors in the export sector. Already a number of export-oriented investors are negotiating with New Delhi.

10. India has vast potentially marketable reserves of metal and mineral ores. Exploiting these reserves (excluding oil and natural gas) would increase mineral production and sharply reduce the \$650 million import bill envisioned for 1975. Copper, lead, zinc, pyrite, and fluorspar reserves, for example, are known to be sufficient for the country's needs. Mineral exploitation, however, requires expertise and technology that must come from abroad. Because the development of many of these minerals is reserved for the public sector, private foreign participation depends essentially on government invitation.

11. Indian government control over private capital - domestic as well as foreign -- is all-encompassing. All foreign exchange transactions must be approved, and it is this approval process that sets the tone and content for practically all private foreign ventures. A complicated licensing process and other time-consuming controls apply to both domestic and foreign businessmen. Unless New Delhi itself is sponsoring or promoting the private foreign proposal, bureaucratic delays and red tape frequently cause foreign investors to withdraw their applications and invest elsewhere.<sup>(7)</sup>

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5. *The Appendix contains a partial list of US firms that have invested in India, the amount of their initial investment, and the percentage share of equity acquired in the Indian firm.*

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7. *The Foreign Investment Board formed in 1968 to help do away with procedural delays deals only with cases where equity investment does not exceed \$2.7 million and is not above 40% of the issued equity capital.*

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Nevertheless, many major private foreign investors have been invited by New Delhi and their projects encouraged and pushed along by the government concessions not available to other private foreign investors.(8)

12. New Delhi has brought private foreign investors under even tighter control. In October 1970, Dinesh Singh, the Minister of Industrial Development, stipulated that foreign equity both in new undertakings and in the expansion of old ones would be restricted to 40%. New Delhi is increasing the pressure on foreign-controlled enterprises to transfer control to local personnel. Technical collaboration, but not investment, is allowed in certain industries, but provisions must now be made in these new agreements to permit the know-how to be passed on to other Indian companies. In addition, the government has reduced the period of patent protection, thus making an earlier transfer of foreign technology to Indian firms easier.(9) A new law prescribes lower royalties, and reserves for the

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*8. Examples of major foreign proposals approved by the government contrary to publicly announced policies include pharmaceuticals, fertilizers, petroleum refineries, and others. New Delhi opened its fertilizer industry to private foreign participation when the US Government agreed to finance part of a large public sector fertilizer plant with the understanding that the Indian Government would permit private US investors into the fertilizer industry. Two US firms along with their Indian collaborators received the first industrial license granted to a private foreign company to manufacture fertilizer in 1961. Final agreement on this first fertilizer collaboration, however, took several years of negotiations, and the plant was not completed until late 1967 - over six years after the license was granted.*

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9. India is not a member of the International (Paris Union) Patent and Trademark Convention. Formerly, patents were granted for a period of 16 years. The new patents act, however, reduced the period of validity of all patents to 14 years and of those for pharmaceuticals, foods, and certain chemicals to seven years from the date of filing or five years from the date of issue of a patent, whichever is shorter.

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government the right to use any patent. Foreign firms have been prohibited from expanding production in certain sectors reserved for small-scale firms, and restrictions governing foreign remittances have been tightened.

13. Many new joint industrial projects involve recurring foreign exchange costs for components, raw materials, and other industrial requirements, and New Delhi wants to buy these competitively rather than exclusively from the foreign partners. Thus the government has announced that foreign collaboration will be permitted only if it meets a critical need and does not inhibit the maximum utilization of domestic know-how and services. Foreign private investment is supposed to be rigidly screened and prohibited where indigenous efforts can provide the same services.

14. In line with its tighter restrictions on foreign investment, New Delhi has demanded that a number of companies reduce their equity as a condition for New Delhi's approval of the firms' expansion proposals. Several companies have since begun selling a portion of their equity. The foreign-owned petroleum industry, which has repeatedly been criticized for one or another reason, recently came under increasing attack because its import prices for crude oil were higher than the level agreed to early this year at the Teheran settlement.<sup>(10)</sup> The government is considering either (a) nationalizing the oil companies, (b) securing equity participation, or (c) revising the existing refinery agreements to permit New Delhi greater latitude in importing crude oil. Anticipating some adverse action by the government, the petroleum companies are repatriating capital.

15. Despite India's discouraging policies, investors continue to seek some kind of a foothold. Numerous private foreign investor groups from the principal developed countries are interested in using cheap Indian labor to manufacture (a) bulk components and sub-assemblies for export and (b) products filling technological and production gaps for sale within India itself. Several collaboration agreements in fishing, the machine tool industry, and export trade (Sears and Roebuck), for example, have been recently concluded.

16. Foreign firms are increasingly offering to collaborate on a minority basis, some even with the government. Phillips Petroleum and the American International Oil Company both, for example, took minority interests with the government in petroleum refineries that began operating in 1966 and 1969, respectively. A wide variety of products, including almost everything from manufacturing farm tractors to sophisticated communication and electronic equipment, are being discussed. The

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government is now actively negotiating with four potential private foreign collaborators to build on a minority basis an automobile factory in the public sector.<sup>(11)</sup> In addition, Mitsubishi of Japan is exploring trade and investment prospects with Indian officials. Japan is more interested in collaboration than investment and wants to organize small export-oriented industries, with technology being Tokyo's greatest contribution. Japanese investors are particularly interested in petrochemicals and mining collaborations and cited the stabilized domestic political situation in India as making the investment climate there "quite normal and promising." Government regulations, however, continued to be cited as a major problem. Finally, recent private US-Indian negotiations have included hotels, automobiles, rubber goods, plastics, computers, fertilizer, machine tools, petrochemicals, dry cell batteries, railway equipment, tire-making machinery, specialized defense industry items, and petroleum.

**Prospects**

17. Although New Delhi will continue, for political reasons, to denounce private foreign investment, it is likely to encourage, as minority partners, investors offering new technology and know-how. Foreign investment in joint ventures has almost quadrupled since Independence. Moreover, the government will make concessions when the country needs certain technology. Past concessions to potential investors have included relinquishing management control for a limited period and accepting some new foreign investors as majority stockholders.

18. Foreign investor interest in India will be attracted by the relatively stable government, the large and expanding domestic market, reasonably liberal provisions for profit repatriation, virtually no record of nationalizing foreign industrial companies, and a large trainable and relatively inexpensive labor supply, including both skilled workers and managerial talent. Moreover, investor attitudes are changing. In contrast to earlier periods when India's socialism scared away investors, many now are quite willing to join even the Indian Government in joint ventures. Nevertheless, India has nowhere near what foreign investors expect in terms of simplification of industrial licensing and other related procedures; and, whereas Indian businessmen have no option but to put up with New Delhi's bureaucracy, foreign investors can look elsewhere.

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*- 11. In the early 1950s the Ford Motor Company would not agree to New Delhi's demands that the company include a minor Indian participation to remain in India. In contrast, Ford is now negotiating in competition with the Japanese, French, and Italians to build a car in the public sector.*

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19. Although joint ventures are likely to increase, most foreign investors will hold a minority share. Also, at the government's urging, many existing foreign-controlled firms will reduce their ownership to a minority by selling off equity. Foreign-owned petroleum refineries and trading organizations are likely to continue disinvesting, as the government clearly intends curbing their operations. Finally, new petroleum policies where New Delhi either takes majority ownership or nationalizes the private foreign refineries - now under consideration - will also sharply increase capital repatriation.

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**APPENDIX**

**Selected US-Indian Collaboration Agreements**

There are over 400 US firms providing technical and financial assistance to India. The names of all these firms and the amount of their equity investment are not available. A selected list of the principal companies appearing in annual publications, *A Directory of Foreign Collaboration in India*, published by Indian Overseas Publications in Delhi, however, are given in Tables 5 and 6.

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Table 5

**Selected US-Indian Collaboration  
Agreements Involving Equity Participation**

| <u>US Firm</u>                                | <u>Initial Equity<br/>Participation</u> |                      | <u>Product or<br/>Process</u> |
|---|---|----------------------|-------------------------------|
|   | <u>Thousand<br/>US \$</u>               | <u>Per-<br/>cent</u> |                               |
| Caltex  | 9,450                                   | 100                  | Refinery                      |
| Esso Standard Eastern                         | 5,166                                   | 60                   | Refinery                      |
| Union Carbide                                 | 4,725                                   | 75                   | Non-electrical<br>machinery   |
| Pfizer Corp.                                  | 4,190                                   | 75                   | Pharmaceuticals               |
| Kaiser Aluminum                               | 3,369                                   | 19                   | Aluminum                      |
| Goodyear                                      | 3,366                                   | 63                   | Tire and rubber               |
| Merck and Co., Inc.                           | 2,646                                   | 60                   | Pharmaceuticals               |
| Firestone Tire and Rubber                     | 2,363                                   | 25                   | Tire and rubber               |
| Sperry Rand                                   | 2,321                                   | 77                   | Machinery                     |
| Firestone Tire and Rubber                     | 2,310                                   | 100                  | Tire and rubber               |
| Merck and Co., Inc.                           | 2,268                                   | 60                   | Pharmaceuticals               |
| Sperry Rand                                   | 2,264                                   | 77                   | Machinery                     |
| Parke Davis and Co.                           | 1,837                                   | 83                   | Pharmaceuticals               |
| Rohm Hass Co.                                 | 1,680                                   | 40                   | Machinery                     |
| Cummins Engine Co.                            | 1,575                                   | 50                   | Engines                       |
| Corning Glass                                 | 1,544                                   | 49                   | Glass                         |
| Parsons and Whittemore                        | 1,323                                   | 35                   | Paper                         |
| United Carbon                                 | 1,302                                   | 40                   | Carbon                        |
| California Chemical Co.                       | 1,212                                   | 7                    | Fertilizers                   |
| International Minerals and<br>Chemicals Corp. | 1,088                                   | 6                    | Fertilizers                   |
| Napco Industries, Inc.                        | 998                                     | 38                   | Gears                         |
| Abbey Etna Machine Co.                        | 988                                     | 39                   | Steel tubes                   |
| American Cyanamide Co.                        | 955                                     | 65                   | Pharmaceuticals               |

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Table 5

**Selected US-Indian Collaboration  
Agreements Involving Equity Participation  
(Continued)**

| <u>US Firm</u>             | <u>Initial Equity<br/>Participation</u> |                      |                               |
|----------------------------|---|----------------------|-------------------------------|
|                            | <u>Thousand<br/>US \$</u>               | <u>Per-<br/>cent</u> | <u>Product or<br/>Process</u> |
| General Electric           | 892                                     | 50                   | Electrical equipment          |
| Sylvania                   | 756                                     | 45                   | Electrical products           |
| Otis Elevator              | 734                                     | 70                   | Machinery                     |
| B. F. Goodrich             | 721                                     | 23                   | Chemicals and plastics        |
| Universal American Corp.   | 635                                     | 29                   | Precision bearings            |
| Sperry Rand Corp.          | 536                                     | 50                   | Industrial                    |
| Great Lakes Carbon Corp.   | 525                                     | 20                   | Graphite                      |
| Textron Industries         | 525                                     | 33                   | Industrial                    |
| Mansfield Tire and Rubber  | 525                                     | 25                   | Tire and rubber               |
| Revere Copper and Brass    | 525                                     | 33                   | Metals                        |
| Air Products and Chemicals | 524                                     | 16                   | Oxygen                        |
| Johnson and Johnson        | 483                                     | 64                   | Pharmaceuticals               |
| Great Lakes Carbon         | 336                                     | 32                   | Carbon                        |
| Frick Co.                  | 321                                     | 61                   | Industrial refrigeration      |
| Borg Warner                | 315                                     | 50                   | Industrial                    |
| Colgate Palmolive          | 315                                     | 100                  | Perfume and cosmetics         |
| Mississippi Glass Co.      | 252                                     | 20                   | Wired glass                   |
| Dayton Rubber              | 210                                     | 5                    | Tires                         |
| Abbot Laboratories         | 21                                      | 100                  | Pharmaceuticals               |

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Table 6

**Selected US-Indian Collaboration Agreements  
Involving Only Technical Participation**

| US Firm                           | Product or Process                 |
|-----------------------------------|------------------------------------|
| Westinghouse Electric             | Refrigeration                      |
| Kaiser Aluminum Technical Service | Aluminum                           |
| Allison L. Boyle & Associates     | Forges                             |
| Universal Oil Products Co.        | Polymers                           |
| Milspring Overseas Corp.          | Paper products                     |
| Transoceanic Engineers            | Chemicals                          |
| Stone & Webster Engineering Corp. | Chemicals                          |
| John Van Der Valk & Associates    | Fertilizer                         |
| Fairbanks Morse & Co.             | Turbine pumps                      |
| Caterpillar Tractors              | Spare parts for tractors           |
| University Loud Speakers Inc.     | Loud speakers                      |
| James F. Walsh                    | Citric acid                        |
| Carrier Corp.                     | Refrigeration and air conditioning |
| Clark Equipment International     | Forklift trucks                    |
| Gabriel Co.                       | Shock absorbers                    |

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Table 6

**Selected US-Indian Collaboration Agreements  
Involving Only Technical Participation  
(Continued)**

| <u>US Firm</u>                   | <u>Product of Process</u>         |
|----------------------------------|-----------------------------------|
| Cluett, Peabody & Co.            | "Sanforized" cloth                |
| Pacific Welding, Alloys Mfg. Co. | Welding electrodes and rods       |
| Landis Machine Co.               | Industrial machinery              |
| Sparkler Mfg. Co.                | Filters                           |
| Kaiser Industries Corp.          | Cement                            |
| RCA                              | Radios and movie projectors       |
| Foster D. Shell Inc.             | Dyes                              |
| Eimco Corp.                      | Sugarcane mud filters             |
| Standard Ore & Alloys Corp.      | Tungsten filaments and coils      |
| Sawyer's Inc.                    | View Master reels and accessories |
| Harnisehfeger Corp.              | Excavators                        |
| Raytheon & Co.                   | Semiconductors                    |
| Allis Chalmers Mfg. Co.          | Earthmoving equipment             |
| Western Electric Co., Inc.       | Transistors                       |
| Eastman-Kodak Co.                | Dry vitamin A                     |

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Table 6

**Selected US-Indian Collaboration Agreements  
Involving Only Technical Participation  
(Continued)**

| <u>US Firms</u>              | <u>Product of Process</u>     |
|------------------------------|-------------------------------|
| Hillor Aircraft Corp.        | Crop dusting                  |
| Union Carbide Corp.          | Cinema arc carbons            |
| Corning Glass                | Glassware                     |
| Allied Chemical              | Fertilizer                    |
| Pittsburgh Plate Glass       | Sheetglass                    |
| E.I. DuPont de Nemours       | Synthetic camphor             |
| Diamond Chain Inc.           | Bicycle and industrial chains |
| Kimberly Clark Corp.         | Paper                         |
| Singer Mfg. Co.              | Sewing machine needles        |
| H.W. Butterworth & Sons      | Machinery spare parts         |
| Hammond Iron Works           | Floating roof tanks           |
| Phillips Petroleum           | Carbon black                  |
| Kelvinator International     | Refrigeration                 |
| Squibb Co.                   | Pharmaceuticals               |
| Allis Chalmers               | Earthmoving equipment         |
| Southern Chemical Cotton Co. | Rayon grade pulp              |
| Clevite Corporation          | Transistors                   |

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Table 6

**Selected US-Indian Collaboration Agreements  
Involving Only Technical Participation  
(Continued)**

| <u>US Firms</u>            | <u>Product of Process</u>              |
|----------------------------|--|
| Tecumseh Products          | Compressors                            |
| Norton Company             | Grinding machines                      |
| Air Products, Inc.         | Industrial gases                       |
| Rockwell and Co.           | Insulating paper                       |
| Olin Mathieson Chem. Corp. | Pharmaceuticals                        |
| American Cyanamide Co.     | Pesticides                             |
| General Electric Co.       | Electric lamps                         |
| International Paper Co.    | Paper, newsprint, and rayon grade pulp |
| United States Rubber Co.   | Tires and tubes                        |
| Hastings Manufacturing Co. | Automobile parts                       |
| Revere Copper and Brass    | Copper brass alloys                    |
| Draper Corp.               | Automatic looms                        |
| Stewart Warner Corp.       | Industrial and automotive equipment    |
| Glidden Co.                | Synthetic camphor                      |
| American Air Filters       | Industrial machinery                   |
| Minnesota Mining and Mfg.  | Insulation materials                   |

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Table 6

**Selected US-Indian Collaboration Agreements  
Involving Only Technical Participation  
(Continued)**

| US Firms                          | Product or Process                   |
|-----------------------------------|--------------------------------------|
| Lock Joint Pipe Co.               | Prestressed concrete pipes           |
| International Harvester           | Tractors                             |
| Monarch Machine Tool Co.          | Lathes                               |
| Gates Rubber Co.                  | Tires and tubes                      |
| Johns Manville Corp.              | Mineral wool                         |
| Michle, Goss, Dexter Inc.         | Printing machinery                   |
| Brown and Root Inc.               | Carbon black                         |
| Johnston Pump Co.                 | Pumps                                |
| Kropp Forge Co.                   | Steel forgings                       |
| Sheffield Corp.                   | Gauges                               |
| Warner Lambert Pharmaceutical Co. | Pharmaceuticals                      |
| Joy Manufacturing Co.             | Diamond core drills                  |
| McNally Pittsburgh Mfg. Corp.     | Coal washeries and cement production |
| Standard Tool Co.                 | Plastic injection moulding machines  |
| McKay Machine Co.                 | Steel tubes                          |
| Drew Chemical Corp.               | Nickel catalyst                      |

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Table 6

**Selected US-Indian Collaboration Agreements  
Involving Only Technical Participation  
(Continued)**

| <u>US Firms</u>                     | <u>Product of Process</u>       |
|-------------------------------------|---------------------------------|
| Avnet Shaw Co.                      | Ceramic precision casting units |
| Sun Chemicals                       | Paints and varnishes            |
| Bendix Westinghouse                 | Airbrake equipment              |
| Chicago Blower Corp.                | Industrial blowers              |
| A.C.F. Industries                   | Automotive parts                |
| Simpson Electric Co.                | Testing equipment               |
| Struthers Wells International Corp. | Chemical machinery              |
| Purolator Products Inc.             | Industrial filtration equipment |
| Hercules Powder Co.                 | Pine chemicals                  |
| Sperry Rand Corp.                   | Typewriters                     |
| Cutler-Hammer Corp.                 | Electrical equipment            |
| Armour and Co.                      | Fertilizer                      |
| General Motors Corp.                | Roadbuilding machinery          |
| Eli Lilly International Corp.       | Pharmaceuticals                 |
| Stauffer Chemical Corp.             | Fertilizers                     |
| Western States Machine Co.          | Sugar machinery parts           |

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